

**REMARKS**

Applicants wish to thank Examiner Metzmaier for the helpful discussion on February 15, 2007.

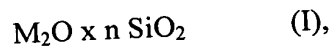
Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

Claims 1, 10 and 18 are independent. Claims 1 and 18 relate to a dried hydrogel and Claim 10 relates to a method of making a hydrogel.

The present invention as set forth in **Claim 1** relates to a dried hydrogel, prepared by

polymerizing an olefinically unsaturated carboxylic acid or its salts in a polymerization reaction mixture;

**admixing the polymerization reaction mixture, before, during or after the polymerization and before drying, with an alkali metal silicate of the general formula I**



wherein M is an alkali metal and n is from 0.5 to 4;

postcrosslinking a resulting polymer;

thereby obtaining a hydrogel containing said postcrosslinked polymer; and

drying said hydrogel at an elevated temperature, to obtain said dried hydrogel;

wherein said postcrosslinking is effected by a crosslinker which is a

compound containing two or more groups that form covalent bonds with the carboxyl groups of said polymer.

In contrast, Procter & Gamble, Trinh et al and Modern Superabsorbent Polymer Technology fail to disclose or suggest, alone or in combination, a dried hydrogel as claimed or a process of preparing a dried hydrogel as claimed in which a

**polymerization reaction mixture, before, during or after the polymerization and before drying, is admixed with an alkali metal silicate.**

Procter & Gamble discloses an odour control system with silica, AGM and zeolites (page 6, 2<sup>nd</sup> paragraph). The term "AGM" means absorbent gelling material and is used as synonym for dried hydrogels or superabsorbent polymers. However, **AGM is not a polymerization mixture before drying.**

Further, Procter & Gamble discloses that spray drying, spray mixing or agglomeration are used to produce the odour control system (page 6, last paragraph). However, there is no disclosure or suggestion that a polymerization mixture before drying be used and admixed with the alkali metal silicate.

Moreover, in Procter & Gamble the silica acts as a binder (page 6, last paragraph) but is not homogeneously distributed in the AGM. According to Procter & Gamble the silica can be distributed homogeneously throughout the absorbent article (page 7, fourth paragraph). Absorbent articles are i.e. sanitary napkins (page 1, first paragraph) and are not the superabsorbent particles itself.

The particulates, granulates, flakes, noodles, and exudates (page 6, third paragraph) reads on mixtures of silica and zeolite only. This disclosure does not mean particles comprising superabsorbent polymers and silica.

However, the Examples of the present invention neutralization of the acid groups in the polymer particles occurs. In Example 1, a solution of soluble sodium silicate and sodium hydroxide is used wherein **74% of the acid groups of the hydrogel are neutralized.**

The result of the claimed invention are polymer particles **wherein the silicate is distributed throughout the particles** as shown in the Declaration of Dr. Manfred Essig dated May 6, 2005. The Declaration was filed at the USPTO on May 9, 2005.

Procter & Gamble refers to crystalline and amorphous silica that means particulate silica, only (page 5, second paragraph). **By mixing of different particulate materials it is impossible to get particles wherein the one material is distributed throughout the other material.** Thus, Procter & Gamble does not disclose a distribution of silica throughout the superabsorbent polymer particles.

Trinh et al discloses mixtures of superabsorbent particles and zeolite (column 25, lines 35-40). Kieselguhr can also be used (column 2, line 38). As shown in Kirk-Othmer "Encyclopedia of Chemical Technology" (IDS attached), "Kieselguhr" is a synonym for diatomite (page 109, first paragraph) and diatomite is a particulate material (page 108, first paragraph). **By wet mixing of different particulate materials it is impossible to get particles wherein the one material is distributed throughout the other material.** That means that Trinh et al does not disclose a distribution of silica throughout the superabsorbent polymer particles.

A person skilled in the art had no motivation to replace a porous silica or silicate with a high surface area (Procter & Gamble, page 5, 2<sup>nd</sup> and 3<sup>rd</sup> paragraphs) by an alkali metal silicate solution. Solvated alkali metal silicates cannot have any pores. The photographs attached to the Declaration does not show any porous silicate.

Modern Superabsorbent Polymer Technology has only been cited to show post-crosslinking and does not cure the defects of Procter & Gamble in view of Trinh et al.

Regarding **Claim 23**, while Procter & Gamble disclose sodium silicate (page 5, 2<sup>nd</sup> paragraph), the same paragraph also discloses crystalline and amorphous silica. Not every sodium silicate is water soluble as claimed in Claim 23. See also Ullmann's Encyclopedia of Industrial Chemistry, Vol. 32 (IDS attached) which categorizes sodium silicate as soluble and solid silicate (see page 412, left column).

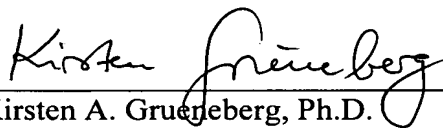
There is no disclosure or suggestion in Procter & Gamble, Trinh et al and Modern Superabsorbent Polymer Technology to use soluble sodium silicate instead of crystalline or amorphous sodium silicate.

Therefore, the rejection of Claims 1-3, 6, 7, 10-14, 16, 18, 20 and 21 under 35 U.S.C. § 103(a) over Procter & Gamble in view of Trinh et al and Modern Superabsorbent Polymer Technology is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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